

Appln. No. 10/614,146
Response to Final Rejection dated January 18, 2006
Reply to Office Action of November 10, 2005

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for producing an automobile assembly comprising a structural member made of a moulded plastics material having a low energy surface and a reinforcing member attached to the structural member, the members having complementary surfaces, which comprises applying an adhesive to the unprimed and untreated complementary surface of the structural member and/or reinforcing member, bringing the complementary surfaces of the reinforcing member and structural member into contact and allowing the adhesive to set so as to bond the structural member and reinforcing member together wherein the adhesive is a polymerizable composition which comprises an organoborane/amine complex, one or more of monomers, oligomers or polymers having olefinic unsaturation which is capable of polymerization by free radical polymerization, and a compound which causes the complex to disassociate so as to release the organoborane to initiate polymerization of one or more of monomers, oligomers or polymers having olefinic unsaturation.

2. (Currently Amended) A method according to Claim 1 in which the low energy surface plastics material has a surface energy of less than 45 mJ/m².

3. (Currently Amended) A method according to Claim 1 in which the plastics material comprises a homopolymer selected from a polyolefin, a polystyrene and a polyamide or a copolymer.

4. (Currently Amended) A method according to Claim 1 in which the plastics material comprises fibre.

5. (Previously Presented) A method according to Claim 4 in which the fibre is selected from short glass fibre, long glass fibre, short natural fibre or long natural fibre.

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6. (Currently Amended) A method according to Claim 1 in which the plastics material is selected from short glass fibre filled polypropylene, long glass fibre filled polypropylene, glass filled polyamide and glass filled polyamide alloys.

~~7. (Previously Presented) A method according to Claim 1 in which the reinforcing member is made of steel and/or aluminium.~~

Claim 8 (cancelled).

9. (Previously Presented) A method according to Claim 1 in which the structural member and reinforcing member are bonded together by a continuum of adhesive along the complementary surfaces on the two members.

10. (Previously Presented) A method according to Claim 1 in which the reinforcing member comprises contours or channels which are complementary with the surface of the structural member so as to provide resistance to stress by means of adhesion and/or abutment between the structural and reinforcing member.

Claim 11 (cancelled).

12. (Currently Amended) A method for producing an automobile assembly comprising a structural member made of a moulded plastics material having a low energy surface which is untreated and unprimed and a reinforcing member attached to the structural member, the members having complementary surfaces, which comprises providing an adhesive comprising a polymerizable composition, which comprises an organoborane/amine complex, one or more of monomers, oligomers or polymers having olefinic unsaturation which is capable of polymerization by free radical polymerization, and a compound which causes the complex to disassociate so as to release the organoborane to initiate polymerization of one or more of monomers, oligomers or polymers having olefinic unsaturation, contacting together the components of the composition under conditions to initiate polymerization, applying the adhesive to the complementary surface of the structural and/or reinforcing member, bringing the complementary surfaces of the reinforcing member and structural member into contact and curing the adhesive whereby the said members bond together.

Claims 13 and 14 (cancelled).

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15. (Previously Presented) A method according to Claim 1 in which the amine part of the organoborane/amine complex is selected from the group of amines having an amidine structural component; aliphatic heterocycles having at least one nitrogen in the heterocyclic ring; primary amines which in addition have one or more hydrogen bond accepting groups wherein there are at least two carbon atoms between the primary amine and the hydrogen bond accepting group; and conjugated imines.

16. (Previously Presented) A method according to Claim 15 in which the amine is selected from dimethylaminopropyl amine, methoxypropyl amine, dimethylaminoethylamine, dimethylaminobutylamine, methoxybutyl amine, methoxyethyl amine, ethoxypropylamine, propoxypropylamine, amine terminated polyalkylene ethers (such as trimethylolpropane tris(poly(propyleneglycol), amine terminated)ether), aminopropylmorpholine, isophoronediamine, and aminopropylpropanediamine.

17. (Previously Presented) A method according to Claim 1 in which the organoborane part of the organoborane/amine complex is selected from a trialkyl borane and an alkyl cycloalkyl borane.

18. (Previously Presented) A method according to Claim 17 in which the organoborane is selected from tri-ethyl borane, tri-isopropyl borane and tri-n-butylborane.

19. (Previously Presented) A method according to Claim 1 in which the molar ratio of amine compound to organoborane compound is from 1.0:1.0 to 3.0:1.0

Claims 21-29 (cancelled).

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